Electromotive Drive, especially for the Pump of a Power-Assisted Steering System of a Motor Vehicle.

Patent Claims

1. Electromotive Drive, especially for the Pump of a Power-Assisted Steering System of a Motor Vehicle,

   a) with a housing (3), which has a bearing journal (15), in which the shaft (18) of a rotor (9) is rotationally mounted, and

   b) with a stator (7) having drive windings, said stator being traversed and retained by the bearing journal (15),

   characterized in that

   c) the stator (7) being substantially retained only transversally by the bearing journal (15) and connected with the remaining housing (3) for transmission of torque in rotationally fixed manner.

2. Drive according to Claim 1, **characterized in that** a gap is provided between the inner walls of the stator (7) and the outer wall of the bearing journal (15).

3. Drive according to Claim 2, **characterized in that** the gap (8) is filled with a viscous medium, preferably with fat.

4. Drive according to Claim 2 or 3, **characterized in that** the stator (7) is coupled with the bearing journal (15) by means of gap (8)-bridging, flexible, preferably vibration-damping elements (12).

5. Drive according to Claim 4, **characterized in that** the flexible elements (12) are O-rings, which are retained in grooves (12a) in the outer wall of the bearing journal (15).

6. Drive according to one of the preceding Claims, **characterized in that** the stator (7) is arranged on a support plate (19), preferable designed as punched-out grid and that the torque transmission from stator (7) to the motor housing (3) takes place via the support plate fastened in the housing.

7. Drive according to Claim 6, **characterized in that**, relative to the torque transmission, means are provided at the underside of the support plate (19) for non-positive or positive coupling of the support plate with the motor housing (3).

8. Drive according to Claim 7, **characterized in that** said means comprise roughening, denticulation or fluting and that the non-positive coupling is created by press-on pressure of the support plate (19) against an installation area of the motor housing (3).

9. Drive according to Claim 7 or 8, **characterized in that** the support plate (19) is designed as plastic extrusion-coated punched-out grid and that the means for non-positive and/or positive coupling of the support plate with the motor housing (3) are provided in the non-plastic coated regions of one or several conductor tracts of the punched-out grid.

10. Drive according to Claim 9, **characterized in that** the means for non-positive and/or positive coupling of the support plate (19) with the motor housing (3) serves, at the same time, for establishing contact with the motor housing, for example, by mass potential.